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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/536,347	03/27/2000	Andrew D. Bailey III	LAM1P126/P0562	3591

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EXAMINER

ALEJANDRO MULERO, LUZ L

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/536,347	Applicant(s) BAILEY, ANDREW D.	
	Examiner Luz L. Alejandro	Art Unit 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-7, 9-18 and 26-32 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-7, 9-15 and 26-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/25/03 has been entered.

Claim Objections

Claim 2 is objected to because of the following informalities: in claim 2-line 13, it appears that the word "a" should be deleted for proper grammar. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2, 12, 15, and 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Dandl, U.S. Patent 5,370,765.

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Dandl shows the invention as claimed including a plasma processing apparatus 10' for processing a substrate 103 comprising: a process chamber comprising: a wall defining part of the process chamber; a device 101 for igniting and sustaining within the process chamber a plasma for said processing; and a plasma confinement arrangement, comprising a magnetic array (105, for example) having a plurality of permanent magnetic elements that are disposed within said process chamber, said plurality of magnetic elements being configured to produce a magnetic field, and wherein said plurality of magnetic elements are within said plasma region, wherein the wall surrounds the magnetic elements and the plasma region so that plasma is able to form plasma deposition on the wall, and wherein the magnetic field produced by the magnetic elements reduces plasma deposition on the wall (see fig. 4A and its description, including col. 13-line 65 to col. 14-line 12).

With respect to claim 15, note that the magnets can be moved or rotated (see col. 13-lines 20-32).

Regarding claim 30, note that the chamber is cylindrical (see, for example, col. 7-lines 62-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 3-7, 10-11, 26-28, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dandl, U.S. Patent 5,370,765 in view of Kadomura, U.S. Patent 6,096,160.

Dandl is applied as above but fails to expressly disclose wherein each of said plurality of magnetic elements extend substantially from a first end of said process chamber to a chuck. Kadomura discloses a plurality of magnetic elements 54 that can be situated in a variety of positions and extend from a first end of said process chamber to a chuck (see fig. 4 and col. 10-lines 1-9). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Dandl so as to include the magnetic arrangement of Kadomura because this is an alternative way in which to enhance the plasma in the processing chamber.

Claims 9 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dandl, U.S. Patent 5,370,765 in view of Kadomura, U.S. Patent 6,096,160 as applied to claims 3-7, 10-12, 26-29, and 31-32 above, and further in view of Taira et al., U.S. Patent 6,153,977.

Both Dandl and Kadomura are applied as above but both references fail to expressly disclose wherein said magnetic elements are contained in sleeves. Taira et al. discloses a permanent magnet 5 contained within a sleeve 2 that shields the magnet from plasma (see fig. 4 and col. 3-line 53 to col. 5-line 16). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was

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made to modify the apparatus of Dandl modified by Kadomura so as to place the permanent magnet in sleeves because in such a way this would prevent any contamination from sputtering of the permanent magnets.

Response to Arguments


Applicant's arguments with respect to claims 2-7, 9-16, and 26-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 703-305-4545. The examiner can normally be reached on Monday to Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 703-308-1633. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Luz L. Alejandro
Primary Examiner
Art Unit 1763

September 30, 2003